

Standard (four-wire) DC Dimmer

Dims and Switches Incandescent and LED Lighting



High performance, fast installation, reliability

When specifications call for high performance, easy installation, and extra tolerance to adverse electrical and thermal conditions, the ZANE Standard (four-wire) DC Dimmer for incandescent lighting is hard to beat. Halogen compatible. Now optimized for LED lighting as well.

Performance features include full-range brightness control with 98 percent efficiency over the entire dimming range. About 99 percent of battery voltage is delivered to the lamp at maximum setting for a brightness that truly equals a toggle switch.

Dual heat sinks, 100 percent soldered connections, and open frame circuit construction all combine to promote long life and high reliability. Double filtering reduces radio interference to the nil-to-none range.

A quality machined aluminum knob adds beauty and durability to the installation. Rotary motion is smooth and exacting, while current draw is reduced to zero at a tactile off position. Soft start and end extend the life of expensive incandescent bulbs.

With tagged lead, detailed installation instructions, and all required mounting hardware, installation only takes

about 10 minutes using standard hand tools (see Wiring Diagram, below right).

Continuous current rating is your choice of 6, 10, 12.5, or 15 amps when free-air sited, somewhat less when confined space sited (see table, reverse side). Units for both 12V and 24V electrical systems are available at the same price.

Most customers mount the unit on their own switch plate or electrical panel through a 1/4-inch drilled hole for exact fit and color match. Factory mounting is also optionally available at extra cost on a UL-rated switch plate including metal (ivory only), plastic (ivory, white, dark brown), stainless steel, or customer-supplied.

Also optionally available at additional cost is silicone seal for extra corrosion protection in harsh environments, and a x25 (high frequency) option for flicker-free performance when using LED panels as a light source for video production.

Features

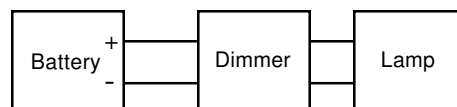
- Full-range brightness control plus tactile on/off. Soft start and end extend bulb life
- Powers incandescent and LED lighting
- Rated for severe conditions
- Nil radio interference
- Both 12V and 24V versions
- Fast installation

Applications

- All mobile
- Energy-efficient housing
- Outdoor and landscape
- Signage
- Heating elements
- Powerful central area lighting
- Focused task area lighting
- Panel and backlighting

Protected under US Patent 5,237,263
Pat Pend
Made in USA
web: www.zaneinc.com

Wiring Diagram



Technical Specifications

Mode of Operation

Continuously variable, pulse width modulation

Supply Voltage Range

12V Version: 8 to 20 vdc working, up to 32 vdc momentary.

24V Version: 18 to 30 vdc working, up to 40 vdc momentary.

Battery or filtered dc only. Fuse or breaker in electrical box

Output Voltage Range

From zero vdc to essentially supply voltage

Continuous Output Current

Full rated current up to 105 F (40 C) ambient, 75% of rated current up to 115 F (46 C)

Ambient Temperature Range

- 40 F (- 40 C) through 115 F (46 C) (with restrictions noted)

DC-DC Conversion Efficiency

About 98% at all brightness settings

Weight

From 3 to about 5 oz (84 to 140 gm) depending on version and options

Size

Basic size is about 1.1" (29 mm) long and wide by 1.3" (35 mm) high.

Maximum size with heat sink is about 1.77" (47 mm) long and wide, by 1.5" (40 mm) high

Reverse Polarity Protection

Can be reverse connected without damage. Fuse link blows if power is reverse connected across negative leads

Service Life of on/off Switch

About 50,000 cycles

Installation

Installs through a 1/4" drilled hole with included hardware. Lugs, keys, flats, etc unneeded

Forward Transient Protection

Double resistive/capacitive filtering, zener diode clamping

Load Types

Resistive loads including incandescent lights and heating elements. Also optimized for LED devices

Line Regulation

Directly proportional to supply voltage

Load Regulation

Generally less than 3% from minimum load to maximum load at any setting

Heat Sink

Heat sinking is electrically isolated from voltage and acts as a circuit enclosure. Temperature rise under maximum load is about 40 F (22 C) above ambient

Power Dissipation of Drive Circuitry

Less than 0.038W. No-load current draw ("on" but at minimum setting) is about 1mA. Zero power used in click-off position

Accessories Included

Detailed installation instructions, mounting hardware (nut, locking star washer, "o" ring)

Safety Construction

Complies with ANSI/RVIA 12V Standards

Warranty and Disclaimer:

Although Manufacturer warrants the goods, so far as the same are of its manufacturer, against defects in materials and workmanship under normal use and service for which they were designed for a period of 90 days after invoice date, Manufacturer's obligation under this warranty are limited, at its option, to the replacement of the part or parts determined to be defective or to the refund of the purchase price.

Claims made in this data sheet are based on extensive testing and are believed to be true. Manufacturer shall under no circumstances be liable for any special, indirect, incidental, or consequential damages owing to failure of the goods. Manufacturer makes no warranty of fitness for a particular purpose or merchantability or any other warranty, oral or written, expressed or implied, except as specifically set forth herein.

Do not use ZANE products as critical components in life support devices or systems, aircraft, or other hazardous applications. Quotation, order acknowledgment, purchase, etc. does not grant or imply a license under any present or future patents owned by seller except to extent purchases are made from seller.

Any goods returned under warranty must be returned freight prepaid with an RA number to ZANE International Inc., Minden, NV.

Standard (four-wire) DC Dimmer for Panel Installation

Part #	UPC Number	Input Voltage	Maximum Current Free air/confined space
ADM-34R-12V	05400	12V	6A/4A
ADM-34R-24V	05500	24V	6A/4A
ADM-44R-12V	05600	12V	10A/8A
ADM-44R-24V	05700	24V	10A/8A
ADM-48R-12V	05800	12V	12.5A/9.5A
ADM-48R-24V	05900	24V	12.5A/9.5A
ADM-54R-12V	06000	12V	15A/11A
ADM-54R-24V	06100	24V	15A/11A